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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,611	12/11/2003	Edgardo Anzures	51819	8541

7590 07/28/2005

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Boston, MA 02209

EXAMINER
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LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/733,611	Applicant(s) ANZURES ET AL.	
	Examiner Sin J. Lee	Art Unit 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-10 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-10 and 13-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicants canceled claims 2, 7, 11, and 12.
2. In view of the amendment of May 16, 2005, previous 102(b) rejection on claims 1 and 5-17 is hereby withdrawn. Scheve et al'643 does not teach or suggest the use of present diisocyanates, triisocyanates, or polyisocyanates.
3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-6, 9, 10 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Barr et al (US 2003/0162123 A1)

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In Example 2, Barr forms a polymer of 2-hydroxyethyl methacrylate (17.6 wt% as calculated by the Examiner), methacrylic acid (15.6 wt.%), and methyl methacrylate (66.8 wt.%), which is functionalized with isophorone diisocyanate. Barr also states that at least one of the functionalized pendent groups comprises a terminal  $\alpha$  or  $\beta$  ethylenically or acetylenically unsaturated group (see claim 1). Therefore, the prior art teaches present inventions of claims 1, 3-6 and 18.

Barr also teaches (see [0055]-[0056]) that his photoimageable composition which contains his polymer can contain photoinitiator as well as crosslinking agents. Thus, the prior art teaches present inventions of claims 9, 10, 13, and 19.

In [0060], Barr forms his photoimageable composition onto a copper substrate. Once applied, the photoimageable composition is exposed to actinic radiation, and the exposed composition is then developed to remove the unexposed portions. After

development, an etchant can be used to remove metal from areas where the photoresist is removed thereby forming a printed circuit. The remaining photoresist is then removed using a stripper. Therefore, Barr teaches present inventions of claims 14-17 and 20.

6. Claims 1, 3-6, 8-10 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Barr et al (US 2004/0063027 A1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In Example 2, Barr forms a polymer of 2-hydroxyethyl methacrylate (17.6 wt% as calculated by the Examiner), methacrylic acid (15.6 wt.%), and methyl methacrylate (66.8 wt.%), which is functionalized with isophorone diisocyanate. Barr also states that pendent functional groups of his polymer can terminate in one or more  $\alpha$  or  $\beta$  ethylenically or acetylenically unsaturated functional groups (see [0020] and [0051]). Therefore, the prior art teaches present inventions of claims 1, 3-6 and 18. Also, in [0056]-[0057], Barr states the following:

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[0056] Functional groups that are to be joined to the polymer backbone and have free reactive groups, such as isocyanate groups, may be reacted with compounds having  $\alpha,\beta$ -ethylenically or acetylenically unsaturated groups to extend the functional pendent groups. Such compounds with unsaturated groups include, but are not limited to, a compound having a formula:



[0057] where  $\text{R}^2$  is hydrogen or methyl,  $(\text{A}_1)$ ,  $(\text{B}_1)$  and  $(\text{C}_1)$  are in any order,  $(\text{A}_1)$  is a chain formed of from 1 to 40 alkoxyate monomers, aromatic-substituted alkoxyate monomers having from 1 to 20 carbon atoms, or mixtures thereof,  $(\text{B}_1)$  is either absent or is a chain formed of from 1 to 40 alkoxyate monomers, or aromatic-substituted alkoxyate monomers having from 1 to 20 carbon atoms, or mixtures thereof, and the monomer composition of  $(\text{B}_1)$  being different than the monomer composition of  $(\text{A}_1)$ , and  $(\text{C}_1)$  is a chain formed of from 1 to 40 open-ring lactone monomers having from 2 to 21 carbon atoms.

Therefore, the prior art teaches present invention of claim 8.

Barr's polymer also contains a group that generates a free radical upon exposure of the compound to actinic radiation (see [0012]). Barr also states ([0017]) that his composition can also contain plasticizers or surfactants. Therefore, the prior art teaches present inventions of claims 9, 10, 13, and 19.

In [0099], Barr forms his photoimageable composition onto a copper substrate. Once applied, the photoimageable composition is exposed to actinic radiation, and the exposed composition is then developed to remove the unexposed portions. After development, an etchant can be used to remove metal from areas where the photoresist is removed thereby forming a printed circuit. The remaining photoresist is then removed using a stripper. Therefore, Barr teaches present inventions of claims 14-17 and 20.

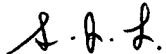
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333.

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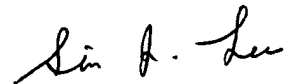
The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee  
July 25, 2005



**SIN LEE**  
**PRIMARY EXAMINER**